

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-3. (Canceled)

4. (Currently amended) A-transparent An electrode structure comprising:

a transparent electrode including ZnO layer; and  
an Mg-doped ZnO film formed on the ZnO layer electrode,  
wherein the electrode is disposed on a semiconductor device,  
wherein the ZnO layer is formed on a semiconductor layer, and  
wherein the semiconductor layer comprises a GaN system semiconductor layer.

5. (Currently amended) A-transparent An electrode structure comprising:

a transparent electrode including ZnO layer; and  
an Mg-doped ZnO film formed on ZnO layer the electrode,  
wherein the electrode is disposed on a semiconductor device, and  
the semiconductor device includes GaN.  
wherein the ZnO layer is formed on a semiconductor layer, and  
wherein the semiconductor layer comprises an n-type GaN system semiconductor layer formed on a substrate, an emission layer formed on the n-type GaN system semiconductor layer, and a p-type GaN system semiconductor layer formed on the emission layer.

6. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the Mg-doped ZnO film overlies an upper surface of the ~~ZnO layer~~ electrode.

7. (Canceled)

8. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein a first metal pattern is formed on the Mg-doped ZnO film.

9. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and a second metal pattern is formed on the semiconductor layer.

10. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the Mg-doped ZnO film improves acid resistance of the transparent electrode.

11. (Currently amended) The ~~transparent~~ electrode structure of Claim 4, wherein the electrode is disposed on a semiconductor layer of the semiconductor device, and the semiconductor layer is formed on a substrate.

12. (Canceled).

13. (Previously presented) A light emitting device comprising:  
a semiconductor layer formed on a substrate;  
a ZnO transparent electrode formed on the semiconductor layer; and  
an Mg-doped ZnO film formed on the ZnO transparent electrode,  
wherein the semiconductor layer comprises a GaN system semiconductor layer.

14. (Previously presented) A light emitting device comprising:  
a semiconductor layer formed on a substrate;  
a ZnO transparent electrode formed on the semiconductor layer; and  
an Mg-doped ZnO film formed on the ZnO transparent electrode,  
wherein the semiconductor layer comprises an n-type GaN system  
semiconductor layer formed on the substrate, an emission layer formed on the  
n-type GaN system semiconductor layer, and a p-type GaN system semiconductor  
layer formed on the emission layer.
15. (Previously presented) The light emitting device of Claim 13, wherein  
the Mg-doped ZnO film overlies an upper surface of the ZnO transparent electrode  
formed on the semiconductor layer.
16. (Canceled).
17. (Previously presented) The light emitting device of Claim 13, wherein  
a first metal pattern is formed on the Mg-doped ZnO film.
18. (Previously presented) The light emitting device of Claim 13, wherein  
a second metal pattern is formed on the semiconductor layer.
19. (Previously presented) The light emitting device of Claim 13, wherein  
the Mg-doped ZnO film improves acid resistance of the light emitting device.
- 20-25. (Canceled).